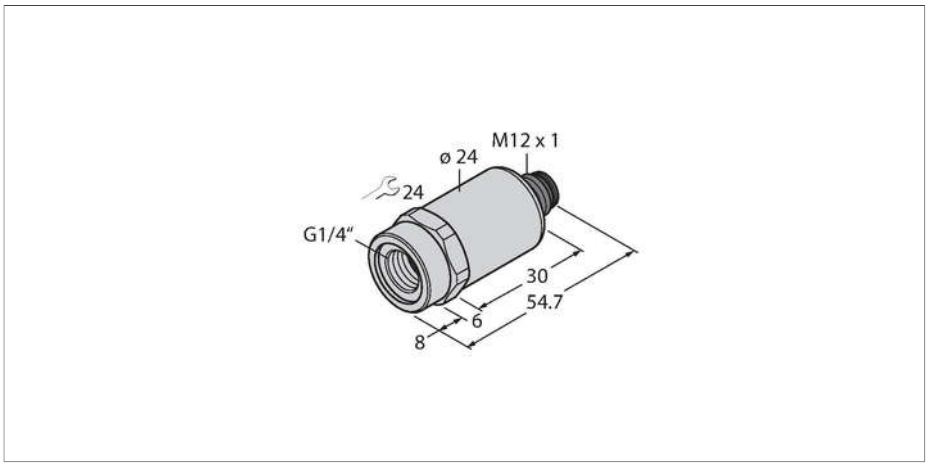
PT250R-2001-U1-H1141/X
Pressure Transmitter – With Voltage Output (3-Wire)





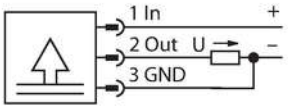
Technical data

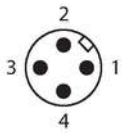
Type	PT250R-2001-U1-H1141/X
ID no.	6836578
Medium temperature	-40…+135 °C
Pressure range	
Relative pressure bar	0…250 bar rel.
	0…3625.95 psi
	0…25 MPa
Admissible overpressure	≤ 750 bar
Burst pressure	≥ 1500 bar
Response time	< 2 ms, typ. 1 ms
Long-term stability	± 0.25 % FS, according to IEC EN 60770-1
Power supply	
Operating voltage	12…33 VDC
Current consumption	≤ 7 mA
Short-circuit/reverse polarity protection	yes / yes
Insulation class	III
Output 1	Analog output
Output function	Analog output voltage
Analog output	
Voltage output	0…10 V
Load	≤ 100 nF/>10 kΩ
Resolution	<± 0.1 % FS
Accuracy LHR	± 0.3 % FS BSL
Housing material	Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyacrylamide 50 % GF UL 94 V-0
Process connection	G 1/4" female thread
Pressure connection material	Stainless steel 1.4404 (AISI 316L)

Features

- Fully welded metal measuring cell
- Pressure range 0…250 bar rel.
- Pressure peak orifice
- 12…33 VDC
- Analog output 0…10 V
- Process connection G1/4" female thread
- Plug-in device, M12 × 1

Wiring diagram





Functional principle

The pressure sensors in the PT…-2000 product series operate with a fully welded metal measuring cell in various pressure ranges of up to -1…1000 bar in 2-, 3- or even 4-wire technology. Depending on the sensor variant, the processed signal is available as an analog output signal (4…20 mA, 0… 10 V, 0…5 V, 1…6 V, ratiometric) or as a digital IO-Link process parameter. The IO-Link sensor variants also have two independently configurable switching outputs.
In addition to the standard variants, there are special sensors for uses such as ATEX areas or for oxygen applications.

PT250R-2001-U1-H1141/X| 15-04-2021 18-40 | Technical modifications reserved

Technical data

A wide range of process connections and electrical connections offer a high degree of flexibility in a wide range of applications.

Pressure transducer material	Stainless steel 1.4435 (AISI 316L)
Wrench size pressure connection / coupling nut	24
Max. tightening torque of housing nut	20 Nm
Electrical connection	Connectors, M12 × 1
Protection class	IP67
Ambient temperature	-30…+85 °C
Storage temperature	-50…+100 °C
Shock resistance	100 g, 11 ms, half sinusoidal curve, all 6 directions, free fall from 1 m onto concrete (6x) , acc. to IEC 68-2-27
Vibration resistance	20 g, 15…2000 Hz, 15…25 Hz with amplitude +/- 15 mm, 1 octave/minute all 3 directions, 50 continuous loads
Approvals	UL
Reference conditions acc. to IEC 61298-1	
Temperature	15…+25 °C
Atmospheric pressure	860…1060 hPa abs.
Humidity	45…75 % rel.
Auxiliary power	24 VDC
Temperature behaviour	
MTTF	1238 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	FKM O-ring special (1 pc)

Technical data

Type	PT250R-2001-U1-H1141/X
ID no.	6836578
Pressure range	
Relative pressure bar	0…250 bar rel.
	0…3625.95 psi
	0…25 MPa
Admissible overpressure	≤ 750 bar
Burst pressure	≥ 1500 bar
Response time	< 2 ms, typ. 1 ms
Long-term stability	0.25 % FS, according to IEC EN 60770-1
Power supply	
Operating voltage	12…33 VDC
Current consumption	≤ 7 mA
Short-circuit/reverse polarity protection	yes / yes
Protection type and class	IP67 / III
Insulation voltage	750 VDC

PT250R-2001-U1-H1141/X| 15-04-2021 18-40 | Technical modifications reserved

Technical data

Outputs	
Output 1	Analog output
Output function	Analog output voltage
Analog output	
Voltage output	0…10 V
Load	≤ 100 nF/>10 kΩ
Resolution	<± 0.1 % FS
Accuracy LHR	± 0.3 % FS BSL
Temperature behaviour	
Medium temperature	-40…+135 °C
Temperature coefficient	± 0.2 % of full scale/10 K
Ambient conditions	
Ambient temperature	-30…+85 °C
Storage temperature	-50…+100 °C
Vibration resistance	20 g, 15…2000 Hz, 15…25 Hz with amplitude +/- 15 mm, 1 octave/minute all 3 directions, 50 continuous loads, acc. to IEC 68-2-6
Shock resistance	100 g, 11 ms, half sinusoidal curve, all 6 directions, free fall from 1 m onto concrete (6x) , acc. to IEC 68-2-27
Housing	
Housing material	Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyacrylamide 50 % GF UL 94 V-0
Pressure connection material	Stainless steel 1.4404 (AISI 316L)
Pressure transducer material	Stainless steel 1.4435 (AISI 316L)
Process connection	G 1/4" female thread
Wrench size pressure connection / coupling nut	24
Electrical connection	Connectors, M12 × 1
Max. tightening torque of housing nut	20 Nm
Reference conditions acc. to IEC 61298-1	
Temperature	15…+25 °C
Atmospheric pressure	860…1060 hPa abs.
Humidity	45…75 % rel.
Auxiliary power	24 VDC
Approvals	UL
MTTF	1238 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	FKM O-ring special (1 pc)

PT250R-2001-U1-H1141/X| 15-04-2021 18-40 | Technical modifications reserved